

**ROCKY FLATS PLANT**  
**EMD OPERATING**  
**PROCEDURES MANUAL**

Manual No.: 5-21000-OPS-FO  
New Manual No.: 4-11000-ER-OPS-FO  
Procedure No.: Table of Contents, Rev 55  
Page: 1 of 4  
Effective Date: 10/06/93  
Organization: Environmental Management

**THIS IS ONE VOLUME OF A SIX VOLUME SET WHICH INCLUDES:**

**VOLUME I: FIELD OPERATIONS (FO)**  
**VOLUME II: GROUNDWATER (GW)**  
**VOLUME III: GEOTECHNICAL (GT)**  
**VOLUME IV: SURFACE WATER (SW)**  
**VOLUME V: ECOLOGY (EE)**  
**VOLUME VI: AIR (AP)**

**EG&G**  
**SUPERSEDED**  
**DOCUMENT**

**TABLE OF CONTENTS**  
**FOR VOLUME I: FIELD OPERATIONS**

<b>Procedure No.</b>	<b>Title</b>	<b>Rev. No.</b>	<b>Effective Date</b>
FO.01	Air Monitoring and Dust Control	2	05/12/92
FO.02	Transmittal of Field QA Records	3	05/22/92
DCN 93.01	Working Base Maps	3	05/12/93
FO.03	General Equipment Decontamination	2	05/12/92
DCN 92.01	EXPIRED (Clarification of Decontamination)	2	Expired
DCN 92.02	Update to Clarification of Decontamination	2	12/12/92
DCN 93.01	CPT Rods	2	02/16/93
FO.04	Heavy Equipment Decontamination	2	05/12/92
DCN 92.01	Expired	1	Expired
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DCN 92.03	Consistency Change	1	09/18/92
DCN 92.04	Update to Clarification of Decontamination	2	12/17/92
FO.05	Handling of Purge and Development Water	2	05/12/92

ADMIN RECORD

DOCUMENT CLASSIFICATION REVIEW WAIVER  
PER R.B. HOFFMAN, CLASSIFICATION OFFICE  
JUNE 11, 1991

A-SW-001280

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FO.06	Handling of Personal Protective Equipment	2	05/12/92
DCN 92.01	Monitoring Change	2	09/18/92
DCN 93.01	Plastic Bagging Modification	2	02/17/93
FO.07	Handling of Decontamination Water and Wash Water	2	05/12/92
DCN 92.01	Consistency Change	2	09/18/92
FO.08	Handling of Drilling Fluids and Cuttings	2	05/12/92
DCN 92.04	EXPIRED (Clarification of Drill Cuttings)	2	Expired
DCN 92.05	EXPIRED (Handling of Drilling Fluids and Cuttings)	2	Expired
DCN 92.06	Clarification of Responsibility	2	09/09/92
DCN 92.07	Elimination of Drilling Requirements on Earthen Dams	2	09/10/92
DCN 92.08	Consistency Change	2	09/18/92
DCN 92.09	Clarification of Augering Technique for OU-6	2	10/28/92
DCN 92.10	Improve Tracking of Samples	2	12/07/92
DCN 93.01	Better Consistency of Drum Handling	2	06/29/93
FO.09	Handling of Residual Samples	2	05/12/92
FO.10	Receiving, Labeling, and Handling Environmental Materials Containers	2	05/12/92
DCN 92.03	EXPIRED (Replaced by DCN 93.01 dated 2/10/93)	2	Expired
DCN 92.04	EXPIRED (Decrease in Weekly Inspections of Gray Drums)	3	Expired
DCN 92.05	Requirement Reduction	2	09/16/92
DCN 92.06	Improve Accountability	2	10/15/92
DCN 92.07	Expired	2	Expired
DCN 92.08	Drum Log F or M Change	2	12/03/92
DCN 93.01	Clarification on Drums (REPLACES DCN 92.03)	2	02/10/93
DCN 93.02	Renewal (DCN 92.07)	2	03/17/93
DCN 93.03	Number of Drums per Pallet	2	05/11/93
DCN 93.04	Sample to Drum Traceability	2	06/23/93
DCN 93.05	Drum Labeling Change	2	06/29/93
DCN 93.06	Drum Sample Numbers	2	06/29/93
DCN 93.07	SVE Sampling Overlap	2	08/18/93

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FO.11	Field Communications	2	05/12/92
FO.12	Decontamination Facility Operations	2	05/12/92
DCN 93.01	Tank Inspection Log	2	04/13/93
FO.13	Containerization, Preserving, Handling and Shipping of Soil and Water Samples	2	05/12/92
DCN 92.01	Chain of Custody EXPIRED	2	EXPIRED
DCN 92.02	Improve Tracking of Samples	2	12/08/92
DCN 93.01	Chain of Custody Record	2	02/10/93
DCN 93.02	Air Bill COC	2	05/18/93
FO.14	Field Data Management	2	05/12/92
DCN 92.01	EXPIRED (Update Bottle Codes and Lab Codes to Current Status)	2	Expired
DCN 92.02	Clarification of Biological Locations (07/08/92- Extended)	2	11/20/92
DCN 92.03	Changes in Procedures (07/08/92 - Extended)	2	11/20/92
DCN 92.04	Expired	2	Expired
DCN 92.05	Update QA/QC Code List	2	09/28/92
DCN 92.06	Clarify Description	2	09/28/92
DCN 92.07	Update Bottle Code List	2	09/28/92
DCN 92.08	Add Sub-Contractor Abbreviations	2	10/14/92
DCN 92.09	Major Form Revision	2	11/03/92
DCN 92.10	Elimination of Non-Required Section	2	11/10/92
DCN 92.11	Update Bottle Code & Lab Codes to Current Status	2	12/09/92
DCN 93.01	New Codes	2	01/15/93
DCN 93.02	New Samplers and New Media	2	01/15/93
DCN 93.03	Field Data for RFEDS	2	02/10/93
DCN 93.04	RFEDS Back-up	2	03/18/93
•DCN 93.05	Replacement of Form 14 C	2	10/06/93
FO.15	Photoionization Detectors (PIDs) and Flame Ionization Detectors (FIDs)	2	05/12/92

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<b>Procedure No.</b>	<b>Title</b>	<b>Rev. No.</b>	<b>Effective Date</b>
FO.16	Field Radiological Measurements	2	05/12/92
DCN 92.04	EXPIRED (Seismic Lines)	1	Expired
DCN 92.05	Addition of HPGe	2	11/24/92
DCN 93.01	FIDLER Surveys	2	01/15/93
DCN 93.02	LUDLUM/FIDLER Guidance	2	06/29/93
FO.17	Determining Out-Of-Specification Analytical Results for Environmental Samples		To Be Added
FO.18	Environmental Sample Radioactivity Content Screening	1	05/12/92
DCN 93.01	Clarification of Procedure	1	01/11/93
FO.19	Base Laboratory Work	2	05/12/92
FO.27	4-BO1-ER-OPS-FO.27 Collection of Floor/Equipment Hot Water Rinsate Samples	0	07/26/93
DCN 93.01	VOC Preservatives	0	8/11/93
DCN 93.02	Fresh Water Samples	0	8/30/93

ENVIRONMENTAL MANAGEMENT  
DOCUMENT CHANGE NOTICE (DCN)

Document Number 5-21000-OPS-FO.14, Rev. 2

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Document Title <b>Field Data Management</b>	Date <b>10-06-93</b> <del>9/15/93</del> <del>9/14/93</del>	DCN Number <b>93.06</b> <i>SIRD</i>
Expires <u>10-06-94</u> <i>SIRD</i> Procedure Revision Required <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		
Scope Limitation: <u>NONE</u>		

Item Number	Page	Step or Paragraph	Changes (Use DCN CONTINUATION SHEET for additional space)
1	Att.	Form FO.14C	<p>Replace Form FO.14C (Surficial Soil Sample Form) with the attached revised version, Rev. <del>16, 9/93</del> 16-Sept.-93  <i>alt 9/20/93</i></p> <p align="center"><b>EG&amp;G SUPERSEDED DOCUMENT</b></p> <p align="center">DOCUMENT CLASSIFICATION REVIEW WAIVER PER R.B. HOFFMAN, CLASSIFICATION OFFICE JUNE 11, 1991</p>

Justification (Reason for change - Provide numbers to reference corresponding items above.)

*1. Form FO.14C has been revised (TO CAPTURE ALL REQUIRED PARAMETERS of SURFICIAL SOIL SAMPLES) 9/22/93*

Concurrence	Organization	Req.	Date	Concurrence	Organization	Req.	Date
<i>[Signature]</i>	QAPM <i>K.B.</i>	X	<i>9-22-93</i>	<i>[Signature]</i>	User/SME	X	<i>9/23/93</i>
<i>[Signature]</i>	FOM	X	<i>9/23/93</i>	<i>L. Sinter</i>	EQS	X	<i>9/20/93</i>
Approval of Responsible manager <i>[Signature]</i>			Date <i>9/24/93</i>	Is Posting required? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		If Yes, by what date <i>upon receipt</i>	
						Date posted 	

## CONTAINERIZATION, PRESERVING, HANDLING AND SHIPPING OF SOIL AND WATER SAMPLES

<b>EG&amp;G ROCKY FLATS PLANT EMD MANUAL OPERATION SOP</b>	<b>Manual:</b>	<b>5-21000-OPS</b>
	<b>Procedure No.:</b>	<b>FO.13, Rev. 2</b>
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	<b>Effective Date:</b>	<b>March 1, 1992</b>
	<b>Organization:</b>	<b>Environmental Management</b>
<b>Category 2</b>		

Appropriate uses for the equipment listed are detailed in the following sections of this SOP.

### 5.2 DEPARTMENT/OFFICE CONTACT LIST

EG&G or its designee is responsible for providing the appropriate documentation for RAD screening, and monitoring of all field samples for shipment off site.

The on-site General Laboratories will need to be contacted before sample shipment for radiological screening and categorization of field samples.

### 6.0 PROCEDURES

Procedures for the containerizing, preserving, handling and shipping of soil and water samples detailed in this SOP follow strict criteria of the USEPA's Contract Laboratory Program. This SOP is intended to present general guidelines for proper sample handling and any deviations or modifications will be documented in the Scope of Work or specific Task Order as well as SOP addendum forms.

#### 6.1 SAMPLE CONTAINERS AND PRESERVATIVE

Only sample containers certified as clean by the manufacturer will be used for sample collection. The containers and preservatives may be obtained from the contracted analytical laboratory, their designated supplier, or a suitable chemical supply company. Any preservative(s) required may be added to the container by the contracted analytical laboratory, field sampling team, sample manager, and/or on-site chemist prior to or during sample collection.

TABLE A-1 (continued)

SAMPLE CONTAINERS, SAMPLE PRESERVATION, AND SAMPLE HOLDING TIMES  
FOR MISCELLANEOUS PARAMETERS

## WATER MATRIX

Parameter	Sample Volume <sup>a</sup> /Container	Preservative	Holding Time
<u>Liquid - Low to Medium Concentration Samples (continued)</u>			
Toxicity Characteristic Leaching Procedure (TCLP)	4 L amber glass	Cool, 4°C	Extract within 7 days, analyze within 40 days
Fluoride	1 L/P	None	28 days
Hardness	300 mL/P, G	1:1 Nitric Acid, pH < 2	6 mo
Nutrients <sup>b</sup>	2 L/P, G	1:1 Sulfuric Acid, pH < 2, Cool, 4°C	28 days
Oil and Grease	1-L widemouth amber glass with Teflon liner	1:1 Sulfuric Acid, pH < 2, Cool, 4°C	28 days
Organic Halides - Total (TOX)	250 mL amber glass with Teflon lined septum closure	Sulfuric Acid, pH < 2; Cool, 4°C	14 days
pH	In situ, beaker or bucket	None	Analyze Immediately
Phenols	1-L amber glass with Teflon lined closure	1:1 Sulfuric Acid, pH < 2, Cool, 4°C	28 days
Phosphate-Ortho	1-L/P, G	Cool, 4°C	48 hr
Phosphorus, Total Dissolved	500 mL/P, G	1:1 Sulfuric Acid, pH < 2, Cool, 4°C	28 days

<sup>a</sup> P = Plastic (polyethylene); G = Glass<sup>b</sup> May include nitrogen series (ammonia, total Kjeldahl, nitrogen, nitrate-nitrite), total phosphorus, chemical oxygen demand.

U.S. DEPARTMENT OF ENERGY ROCKY FLATS PLANT  
SURFICIAL SOIL SAMPLE FORM

FORM FO.14C  
Revision 16-SEP-93

DCN # 3-21000-01-1-017, R.  
43.05  
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Sample Collection Form			
Project Number	:		
Sample Number	:		Type : SS
Contractor	:		
Station Code	:		

  

Collection Date	:	Quarter:	Disposition:
Collection Time	:	Purpose:	
Sample Location	:		
Composite	:	(Y/N)	
Composite Desc	:		
QC Type	:	Partner:	
Collection Method	:		

  

Sample Team Leader	:		
Member	:		
Member	:		
Volume Collected	:		Units:
Prepared By	:		

Surface Soil Sample Form		
Depth of Take	Start	End
	in	
	in	
	in	
	in	
Headspace Reading Comments		

Sample Crew Member:	
	Print Name
Signature	Date